

CLAIMS

What is claimed is:

1. A hardware upgrade for a terminal, the hardware upgrade comprising:

an interface to the terminal whereby subscriber selections and audio signals that represent audio programs may be received;

audio processing circuitry, connected to the interface, that processes the audio signals; and

an output, connected to the processing circuitry, that outputs a selected audio signal based on the subscriber selections.

2. The hardware upgrade of claim 1 wherein the audio processing circuitry comprises a tuner.

3. The hardware upgrade of claim 1 wherein the audio signals are digital audio signals and the audio processing circuitry comprises a demodulator.

4. The hardware upgrade of claim 1 wherein the audio signals are digital audio signals and the audio processing circuitry comprises digital audio processing circuitry.

claims 1-36 ok
for 7-20/94
Xuhua
Sub B37

00462768-093098
860660-89229760

Sub
el
Q

5. The hardware upgrade of claim 4 wherein the digital audio processing circuitry comprises a demultiplexor to select the selected audio signal.
6. The hardware upgrade of claim 4 wherein the digital audio signals are encrypted and the digital audio processing circuitry comprises a decryptor.
7. The hardware upgrade of claim 4 wherein the digital audio signals are compressed and the digital audio processing circuitry comprises a decompressor.
8. The hardware upgrade of claim 1 wherein the output is one or more connectors to one or more speakers.
9. The hardware upgrade of claim 1 wherein the output is one or more connectors to a stereo.
10. The hardware upgrade of claim 1 further comprising a microprocessor connected to the interface and processing circuitry, the microprocessor accepting the subscriber selections and controlling the audio processing circuitry.

C/cont

0016275-0099
860E60-89429160

11. The hardware upgrade of claim 1 further comprising a remote control unit, the remote control unit comprising inputs for entering the subscriber selections.
12. The hardware upgrade of claim 11 wherein the remote control unit comprises a display.
13. The hardware upgrade of claim 12 wherein the display comprises a channel identifier display that displays a channel identifier corresponding to a subscriber selection.
14. The hardware upgrade of claim 12 wherein the display comprises an LED device.
15. The hardware upgrade of claim 12 wherein the display comprises an LCD device.
16. The hardware upgrade of claim 1 wherein the interface to the terminal comprises a four-wire connector.

17. The hardware upgrade of claim 1 wherein the interface to the terminal comprises a multipin connector.
18. The hardware upgrade of claim 17 wherein the multipin connector is a multipin connector ranging from type DB9 to type DB25.
19. The hardware upgrade of claim 1 wherein the interface to the terminal comprises a SCSI connector.
20. The hardware upgrade of claim 1 further comprising a menu generator, whereby the subscriber selections comprise menu selections from one or more menus generated by the menu generator.
21. The hardware upgrade of claim 1 further comprising a channel identifier display that displays a channel identifier corresponding to a subscriber selection.
22. The hardware upgrade of claim 1 wherein the selected audio signals is a stereo signal comprising left and right components.

~~23.~~ A terminal comprising:

- 3 a receiver adapted to receive programs including audio programs;
- 6 a subscriber interface adapted to receive subscriber inputs including subscriber audio program selections; and
- 9 a hardware upgrade, connected to receive the subscriber selections and audio signals that represent the audio programs, the hardware upgrade comprising:
- 12 an interface to the terminal whereby the audio signals and subscriber selections may be received;
- 15 audio processing circuitry, connected to the interface, that processes the audio signals; and
- 18 an output, connected to the processing circuitry, that outputs a selected audio signal based on the subscriber selections.

24. The terminal of claim 23 wherein the terminal is capable of receiving audio/visual programs in addition to the audio programs, an audio/visual program being represented by an audio signal accompanied by a corresponding video signal, and an audio program being represented by only an audio signal.

25. The terminal of claim 23 further comprising a remote control unit, the remote control unit comprising inputs for entering the subscriber selections.
26. The terminal of claim 25 wherein the remote control unit comprises a display.
27. The terminal of claim 26 wherein the display comprises a channel identifier display that displays a channel identifier corresponding to a subscriber selection.
28. The terminal of claim 26 wherein the display comprises an LED device.
29. The terminal of claim 26 wherein the display comprises an LCD device.
30. The terminal of claim 23 further comprising a menu generator, whereby the subscriber selections comprise menu selections from one or more menus generated by the menu generator.

31. The terminal of claim 23 wherein the terminal has an expansion card slot, and the interface comprises at least one card connector adapted for use with the expansion card slot.

32. The terminal of claim 23 further comprising a display that indicates when the hardware upgrade is in use.

33. The terminal of claim 23 wherein the hardware upgrade is remotely located from the terminal.

34. The terminal of claim 23 further comprising a channel identifier display that displays a channel identifier corresponding to a subscriber selection.

35. The terminal of claim 23 wherein the receiver is further adapted to receive one or more data signals containing information about the audio programs.

36. The terminal of claim 23 wherein the terminal is a set top terminal.

Sub B57 37.

3

A system for delivery and reception of audio programs, the system comprising:

6

a television program delivery system adapted to deliver programs including audio programs; and

9

a terminal adapted to receive the programs from the television program delivery system, the terminal comprising:

12

a receiver adapted to receive the programs including the audio programs;

15

a subscriber interface adapted to receive subscriber inputs including subscriber audio program selections; and

18

a hardware upgrade, connected to receive the subscriber selections and audio signals that represent the audio programs, the hardware upgrade comprising:

21

an interface to the terminal whereby the audio signals and subscriber selections may be received;

24

audio processing circuitry, connected to the interface, that processes the audio signals; and

09162768-093098
860360-89229760

27

an output, connected to the processing circuitry, that outputs a selected audio signal based on the subscriber selections.

38. The system of claim 37 wherein the television program delivery system is a cable television program delivery system.

39. The system of claim 37 wherein the cable television program delivery system further comprises an operations center, the operations center transmitting one or more of the programs to the terminal.

40. The system of claim 37 wherein the cable television program delivery system further comprises one or more headends, a particular one of the one or more headends transmitting one or more of the programs to the terminal.

41. The system of claim 37 wherein the television program delivery system is a direct satellite broadcast system.

42. The system of claim 37 wherein the television program delivery system comprises one or more fiber optic connections to the terminal.

C/ 43. The system of claim 37 wherein the television program delivery system comprises one or more telephone line connections to the terminal.

44. The system of claim 37 wherein the terminal is a set top terminal.

Sub B6/ 45. A method for receiving audio programs at a terminal capable of receiving audio/visual programs in addition to the audio programs, an audio/visual program being represented by an audio signal accompanied by a corresponding video signal, and an audio program being represented an audio signal only, the method comprising the steps of:

3

receiving digital audio signals that represent the audio programs;

6

receiving subscriber selections;

9

selecting one of the digital audio signals using one or more of the subscriber selections;

12

processing the selected audio signal; and

15

outputting the processed audio signal.

860E60-89229T60

46. The method of claim 45 wherein the step of processing comprises tuning.

47. The method of claim 45 wherein the step of processing comprises demodulating.

48. The method of claim 45 wherein the step of processing comprises demultiplexing to select the selected audio signal.

49. The method of claim 45 wherein the digital audio signals are encrypted and the step of processing comprises decrypting.

50. The method of claim 45 wherein the digital audio signals are compressed and the step of processing comprises decompressing.

51. The method of claim 45 further comprising the step of:

playing the selected audio program on one or more speakers.

playing the selected audio program on a stereo.

controlling the processing and selecting steps using the microprocessor.

entering the subscriber selections on a remote control unit.

displaying a channel identifier corresponding to a subscriber selection on the display.

56. The method of claim 55|wherein the display comprises an LED device.

57. The method of claim 55 wherein the display comprises an LCD device.

58. The method of claim 45 further comprising the steps of:

generating one or more menus; and

receiving one or more of the subscriber selections from one or more menus generated by the menu generation capability.

59. The method of claim 45 further comprising the step of:

receiving a data signal that identifies the audio programs.

60. The method of claim 45 wherein the selected audio signal is a stereo signal comprising left and right components.

61. The method of claim 45 wherein the terminal is a set top terminal

Sub B77

62. An apparatus capable of receiving audio/visual programs and audio programs, an audio/visual program being represented by an audio signal accompanied by a corresponding video signal, and an audio program being represented an audio signal only, the apparatus comprising:

a receiver adapted to receive the programs including audio programs represented by digital audio signals;

a subscriber interface adapted to receive subscriber inputs including subscriber audio program selections;

audio processing circuitry, connected to the receiver, that processes the audio signals; and

an output, connected to the processing circuitry, that outputs a selected audio signal based on the subscriber selections.

63. The apparatus of claim 62 wherein the audio processing circuitry comprises a tuner.

64. The apparatus of claim 62 wherein the audio processing circuitry comprises a demodulator.

001637-093098

65. The apparatus of claim 62 wherein the audio processing circuitry comprises a demultiplexor to select the selected audio signal.

66. The apparatus of claim 62 wherein the digital audio signals are encrypted and the audio processing circuitry comprises a decryptor.

67. The apparatus of claim 62 wherein the digital audio signals are compressed and the audio processing circuitry comprises a decompressor.

68. The apparatus of claim 62 wherein the output is one or more connectors to one or more speakers.

69. The apparatus of claim 62 wherein the output is one or more connectors to a stereo.

70. The apparatus of claim 62 further comprising a microprocessor connected to the subscriber interface and processing circuitry.

71. The apparatus of claim 62 further comprising a remote control unit, the remote control unit comprising inputs for entering the subscriber selections.

09162768-093088

72. The apparatus of claim 71 wherein the remote control unit comprises a display.

73. The apparatus of claim 72 wherein the display comprises a channel identifier display that displays a channel identifier corresponding to a subscriber selection.

74. The apparatus of claim 72 wherein the display comprises an LED device.

75. The apparatus of claim 72 wherein the display comprises an LCD device.

76. The apparatus of claim 62 further comprising a menu generator, whereby the subscriber selections comprise menu selections from one or more menus generated by the menu generator.

77. The apparatus of claim 62 wherein the receiver is further adapted to receive one or more data signals that contain information about the audio programs.

091623-093093

c/ 78. The apparatus of claim 62 wherein the selected audio signal is a stereo signal comprising left and right components.

79. The apparatus of claim 62 wherein the apparatus is a set top terminal.

Sub B⁸¹

3 80. An apparatus capable of receiving audio/visual programs and audio programs, an audio/visual program being represented by an audio signal accompanied by a corresponding video signal, and an audio program being represented an audio signal only, the apparatus comprising:

6 means for receiving the programs including audio programs represented by digital audio signals;

9 means for receiving subscriber inputs including subscriber audio program selections;

12 means, connected to the means for receiving programs, for processing the audio signals; and

15 means, connected to the means for processing, for outputting a selected audio signal based on the subscriber selections.

81. The apparatus of claim 80 wherein the means for processing comprises means for tuning.

0016768-10938

82. The apparatus of claim 80 wherein the means for processing comprises means for demodulating.

83. The apparatus of claim 80 wherein the means for processing comprises means for demultiplexing the audio signals to select the selected audio signal.

84. The apparatus of claim 80 wherein the digital audio signals are encrypted and the means for processing comprises means for decrypting.

85. The apparatus of claim 80 wherein the digital audio signals are compressed and the means for processing comprises means for decompressing.

86. The apparatus of claim 80 wherein the means for outputting a selected audio signal comprises means for connecting to one or more speakers.

87. The apparatus of claim 80 wherein the means for outputting a selected audio signal comprises means for connecting to a stereo.

09162768-00098
860260-83/25160

- 1

94. The apparatus of claim 80 further comprising means for generating menus, whereby the subscriber selections comprise menu selections from one or more menus generated by the means for generating menus.

95. The apparatus of claim 80 further comprising means for receiving a data signal that identifies the audio programs.

96. The apparatus of claim 80 wherein the selected audio signal is a stereo signal comprising left and right components.

97. The apparatus of claim 80 wherein the apparatus is a set top terminal.

66060-89/29T60

Ad
A4

A4

Ad B12